# Adolescent Suicide: A Literature Review

by

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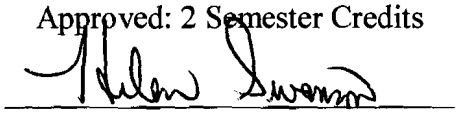
A Research Paper
Submitted in Partial Fulfillment of the
Requirements for the
Master of Science Degree
in

School Psychology

Approved: 2 Semester Credits



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May, 2007

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| **Author:** | **Kadisak, Kelly A.** |
| **Title:** | ***Adolescent Suicide: A Literature Review*** |
| **Graduate Degree/Major:** | **MS Ed School Psychology** |
| **Research Advisor:** | **Helen Swanson, Ph.D.** |
| **Month/Year:** | **May, 2007** |
| **Number of Pages:** | **30** |
| **Style Manual Used:** | **American Psychological Association, 5th edition** |

ABSTRACT

This literature review is an examination of the issue of adolescent suicide, including risk factors, warning signs, methods, and prevention strategies. The biological, psychological, and sociological factors that may contribute to adolescent suicide are addressed. Prevention strategies that can be implemented at various levels, including the federal government, community, and school-based programs, are also discussed. Finally, recommendations for further research, including adolescent use of antidepressants and standardized programs for suicide prevention, are provided.

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# CHAPTER 1

## INTRODUCTION

Extensive research has been conducted on adolescent suicide; yet the rate of suicide among this age group has increased at an alarming rate. There are many facets associated with suicide, including suicidal ideation, suicide attempts, and completed suicides. Although there are many mental health resources available where adolescents can seek help, such as their school counselors and mental health agencies, too few find this help, which is one reason why it continues to be such a serious and growing problem.

Recently, suicide rates among children, adolescents, and young adults have dramatically increased. According to the National Mental Health Association (1997), each year, almost 5,000 young people between the ages of 15 and 24 years commit suicide. The rate of suicide for this age group has almost tripled since 1960, which makes it the third leading cause of death among adolescents, and the second leading cause of death among college-age youth. The National Alliance on Mental Illness (2006) reported that in 1996, more teenagers and young adults died of suicide than from cancer, heart disease, AIDS, birth defects, stroke, pneumonia, influenza, and lung disease combined.

According to the Centers for Disease Control and Prevention (2004), an estimated 276,000 teenagers between the ages of 14 and 17 years will try to kill themselves each year, and about 5,000 will succeed. For every teenage suicide, there are over 100 attempts that are unsuccessful, which suggests that "copycat" suicides spread this tragedy further. The Department of Health and Human Services (1999) reported that Americans under the age of 25 years accounted for 15% of all suicide deaths in 1996. It reported that the suicide rate among children aged 10 to 14 years was 1.6 for every 100,000; the rate for

children aged 15 to 19 years was 9.7 per 100,000; and the rate for young adults from age 20 to 24 years was 14.5 per 100,000. Suicide rates among this age group continue to remain a serious problem despite the resources available for intervention.

A completed suicide is a death from injury, poisoning, or suffocation where there is evidence that the self-inflicted act led to the individual's death. Suicidal ideation and suicidal behavior, including suicidal attempts, are also of major concern. Suicidal ideation refers to self-reported imagery of engaging in suicide-related behavior. Suicidal behavior consists of suicidal planning, suicide attempts, and completed suicide. A suicidal attempt is a potentially self-injurious behavior with a nonfatal outcome, where there is evidence that the individual intended to kill himself or herself, which may or may not result in injuries to the individual. It is essential to know that when an adolescent exhibits suicidal ideation or suicidal behavior, they are in need of professional support and treatment.

The Centers for Disease Control and Prevention conducts a survey every two years to monitor health risk behaviors, including suicidal behaviors. It is called the Youth Risk Behavior Surveillance System (YRBSS). The statistics in the most current survey conducted by the CDC at the time of this writing, in 2005, on youth suicidal behavior are frightening. According to the survey of students in 9$^{th}$ through 12$^{th}$ grades, nationwide, 16.9% of students seriously considered attempting suicide during the year preceding the survey, and 13.0% of students actually made a plan to attempt suicide. Also, 8.4% of students nationwide attempted suicide on one or more occasions during that same time period. Additionally, 2.3% of students nationwide had made a suicide attempt that resulted in an injury, poisoning, or overdose that required treatment by a doctor or nurse.

Society must recognize that these statistics represent a serious, growing problem among children, adolescents, and young adults.

*Statement of the Problem*

This literature review is an exploration of the issue of adolescent suicide, including suicidal ideation and behaviors, risk factors and warning signs, methods and prevention strategies.

*Purpose of the Study*

The purpose of this study is to provide a summative resource to assist family, friends, and educators of adolescents who are currently contemplating suicide or are otherwise involved in suicidal behaviors, to understand how to recognize this problem and how they can help these adolescents to seek appropriate treatment.

*Research Questions*

The following questions guided this research paper:

1. What risk factors are involved in adolescent suicide and suicidal behavior?
2. What are the most common types of suicidal attempts and suicidal completions?
3. What are the most effective prevention strategies for adolescent suicide and suicidal behavior?

*Definition of Terms*

For clarity and understanding, the following terms are defined:

*At-risk:* Adolescents who possess characteristics that make them more likely to engage in suicidal behavior.

*Attempted Suicide:* Unsuccessful, nonfatal attempt to complete suicide.

*Completed Suicide:* Death from intentionally self-inflicted injury, poisoning, or suffocation with evidence that the act led to the individual's death.

*Suicidal Behavior:* Suicidal planning, suicide attempts, and completed suicide.

*Suicidal Ideation:* Imagery about engaging in suicide-related behavior.

*Assumptions of the Research*

There were assumptions involved in the published studies on adolescent suicide reviewed here. One assumption was that the participants and researchers of the studies were honest and unbiased. Second, the research designs and procedures used in the studies were developmentally appropriate. Third, the validity and reliability of the instrumentation were appropriate. Fourth, the prevention and intervention strategies used in the studies were designed to accommodate the needs of the adolescent population. Finally, the definitions of suicide and suicidal behavior were used consistently and accurately applied.

*Limitations of the Research*

There were also a number of limitations of the research that should be considered. There are some aspects of adolescent suicide which are not included in this literature review. First, while risk factors and warning signs of adolescent suicide are discussed, there is no discussion of protective factors. These are factors that decrease the likelihood of an adolescent engaging in suicidal behaviors. Second, there is no discussion of the more uncommon methods of adolescent suicide, such as drowning, starvation, and car collision. A third aspect that is not included in this review is suicide prevention programs for college-age students.

There are at least three areas of adolescent suicide in which research is virtually non-existent. One area is the feasibility of implementing suicide prevention programs within the school environment, including time and cost. The second area is the current knowledge that parents, adolescents, educators, and other youth workers may already have regarding adolescent suicide. The final area is the degree of effectiveness of adolescent suicide prevention programs for students of color.

# CHAPTER 2

# LITERATURE REVIEW

## *Introduction*

This chapter addresses research regarding the risk factors and warning signs involved in adolescent suicide and suicidal behavior, the most common methods of suicidal attempts and suicidal completions, and the most effective prevention strategies for adolescent suicide and suicidal behavior.

## *Risk Factors*

Adolescence is an important transitional period in where many children want to become "their own person." It is a time of many "ups and downs." Adolescents experience strong feelings of stress, confusion, self-doubt, pressure to succeed, and many other fears while growing up. All too often, the risk factors and warning signs of suicide are overlooked because adolescence is marked by these strong feelings and even rebellious behavior. However, it is crucial to distinguish these feelings and behaviors of normal adolescents from those of suicidal adolescents.

According to the Centers for Disease Control and Prevention (2006), a risk factor is defined as anything that increases the likelihood that an individual may harm themselves; however, risk factors are not necessarily causes for suicidal behavior. There are several risk factors for adolescent suicide. Many youth suicides are the result of an interaction between biological, psychological, sociocultural, and family factors. One highly prevalent risk factor for adolescent suicide is having a psychiatric disorder. According to the American Foundation for Suicide Prevention (2006), at least 90% of people who kill themselves have a diagnosable and treatable psychiatric illness. This

includes disorders such as depression, bipolar disorder, schizophrenia, posttraumatic stress disorder, eating disorders (anorexia and bulimia), and borderline personality disorders. According to Gould, Greenberg, Velting, and Shaffer (2003), more than 90% of adolescent suicide victims have at least one major psychiatric disorder. Another important factor to consider is substance abuse. The National Institute on Drug Abuse recently funded a study by Kelly, Cornelius, and Clark (2004), which attempted to determine the effects of psychiatric disorders on attempted suicide on adolescents with substance use disorders. The results showed that males who attempted suicide had an earlier onset of alcohol use disorders and increased mood and behavior disorder symptoms than those who did not attempt suicide, while the females who attempted suicide had an earlier onset of mood disorders and substance use disorders compared to females who did not attempt suicide. The suicide risk increases 50-fold for adolescents with substance abuse comorbid with mood disorders (Brent, Baugher, Bridge, Chen, & Chiappetta, 1999). Previous suicide attempts render adolescents at further risk for another attempt in the future. Approximately one third of teen suicide victims have already made a previous attempt. Gould and Kramer (2001) found that males who have previously attempted suicide are at a 30-fold increase for completing suicide, and females who have a history of prior attempts are at a 3-fold increase of completing suicide. A study of psychosocial risk factors conducted by Lewinsohn, Rohde, and Seeley (1994) indicated that the strongest predictor of future suicide attempt was past attempt. Another important risk factor includes genetic predisposition. This includes any family history of psychiatric illness, suicide, suicide attempts, and alcohol or other drug abuse. Also, a stressful situation is another risk factor in suicide. For adolescents, this could include many

situations, such as a divorce, moving, an ill family member or friend, the loss of a loved one, and self-identification as homosexual. A study by Russell and Joyner (2001) involving 11,000 adolescents showed that homosexual adolescents had an increased risk of attempting suicide twice that of heterosexual adolescents. An adolescent's home environment also weighs heavily on thoughts of suicide. A history of physical, sexual, or emotional abuse may contribute to an increased risk of adolescent suicide. Family dysfunction also has a negative impact on an adolescent's ability to cope with problems they encounter. One factor included in the area of family dysfunction is negative parent-child relationships and poor communication among family members. A study by O'Donnell, Stueve, Wardlaw, and O'Donnell (2003) indicated that adolescents who reported that they were less likely to go to a family member when they had problems were among those most likely to report a suicide attempt.

According to the Department of Health and Human Services (1999), easy access to lethal methods increases the risk factor of suicide. Physical availability is one determinant of the choice of method of suicide. Physical availability is the extent to which a particular agent of suicide is accessible (Cantor & Baume, 1998). The success of a suicide attempt often depends on the method chosen; when an individual uses a firearm, death is almost certain (Portes, Sandhu, & Longwell-Grice, 2002). However, Kleck (1997) argues that firearm availability measures are significantly and positively associated with rates of firearm suicides, but is not correlated with total suicide rates. These results support the view that substitution methods are used when specific methods are unavailable. The restrictions on availability must be evaluated as well as the potential

for substitution. However, the United States is already swamped with firearms, making restrictions on firearm availability more problematic (Cantor & Baume, 1998).

Adolescents feel pressure to succeed in school and other activities such as sports. If they experience a failure in school or another activity, they may feel they are under too much pressure to succeed, which can increase their risk of contemplating suicide. Another risk factor of adolescent suicide is the exposure to other teenagers who have committed suicide. Teenagers are at an increased risk to kill themselves if they have recently read, seen, or heard about other teen suicide attempts. Another unfortunate risk factor is the lack of access to mental health treatment, or the unwillingness to seek treatment for their mental illness due to the stigma associated with mental health disorders.

Ethnicity is another important factor that should be considered when discussing adolescent suicide. Among the most studied include those of Native American, Hispanic, African American, and Caucasian descent. The National Organization for People of Color Against Suicide (NOPCAS, 2002) reports that Native Americans have the highest rate of suicide among minorities. Werenko, Olson, Fullerton-Gleason, Lynch, Zumwalt, and Sklar (2000) found that American Indian/Alaska Native adolescents experienced the highest death rate, followed by Caucasian and Hispanic adolescents. The Centers for Disease Control and Prevention (1998) reported that between 1980 and 1995, the suicide rate for African American adolescents aged 10 to 19 years increased by 114%. In addition, in 1980, the suicide rate for Caucasian adolescents was 157% greater than that for African American adolescents. However, by 1995, the rate for Caucasians was only 42% higher than African Americans, which indicates that the gap between black and

white adolescent suicides closed significantly. The Centers for Disease Control and Prevention (2004) analyzed data on Hispanic suicides from 1997-2001, which included persons of Mexican, Puerto Rican, Cuban, Central and South American, and other/unknown origins. They concluded that Hispanic youth account for 26% of Hispanic suicides. In addition, Hispanics, particularly females, in grades 9-12 report more suicidal ideation and attempts compared to Caucasian and African American peers.

*Warning Signs*

There are also numerous warning signs that adolescents may exhibit when they are contemplating suicide, which may be expressed in verbal, physical, and behavioral manners. They may make verbal remarks such as "Nothing matters," or "There's no use," "I won't see you again," "I want to die," or they may complain about how they are a bad person. They may also withdraw from friends, family, and activities they once enjoyed.

Adolescents may also show many behavioral signs before a suicide attempt. Their eating and sleeping patterns may change. They may show changes in their personality, such as violent and rebellious behavior, and possibly running away. It is also possible that they become more cheerful after a period of time when they were depressed. They may exhibit symptoms of psychosis, including hallucinations and bizarre thoughts. Another sign is the giving away of possessions and throwing away their belongings. They may use drugs and alcohol at this time. The quality of their schoolwork may decline, and their grades may suddenly drop.

There are also some physical warning signs to look for. Teenagers may begin to neglect their personal appearance and hygiene. They may also begin to complain about physical symptoms. These symptoms may include headaches, stomachaches, or fatigue.

These warning signs should not be taken lightly. Parents, family members, loved ones, friends, and educators need to be aware of all of these warning signs, including the verbal, physical, and behavioral signs that an adolescent may exhibit before attempting suicide, as they provide extremely valuable information for the prevention of suicide.

*Methods of Suicide Attempts and Suicide Completions*

There are several different methods that an adolescent can use to attempt or complete suicide. These methods may result in a suicide attempt that is unsuccessful and nonfatal, but may require medical attention, or they may result in a completed suicide. Some of the more commonly used methods include the use of firearms, suffocation, poisoning, and faking an accident, such as a fall.

Data on suicides occurring in the United States between 1992 and 2001 were obtained through an instrument developed by the Centers for Disease Control and Prevention (2004), called the Web-based Injury Statistics Query and Reporting System (WISQARS). This data was examined by age group (which included individuals from ages 10 to 14 and 15 to 19 years) and method (which included firearm, suffocation, and poisoning) for each year and the 10-year period. Annual suicide rates were calculated for each method (per 100,000 people) by age group and overall.

According to the Centers for Disease Control and Prevention (2004) data, the most common method of suicide in this age group (ages 10 to 19 years) was by firearm, which accounted for 49% of all suicides. The second most common method was suffocation (most frequently by hanging), which accounted for 38% of the suicides. Finally, poisoning was the third most common method of suicide by this age group, which accounted for 7% of the suicides during that time period.

The CDC (2004) also reported that methods of suicide have changed greatly between the years of 1992 and 2001. The reasons for the changes in methods of suicide are not understood. The data obtained by the Centers for Disease Control and Prevention (2004) regarding how individuals choose among the different methods of suicide may suggest that some individuals without ready access to lethal methods (such as firearms) may choose not to engage in a suicidal act; or if they do engage in suicidal behavior, they may be more likely to survive the injuries sustained. Conversely, certain subgroups of suicidal adolescents may substitute other methods. Substitution with other methods depends on the availability of alternative methods and their acceptability by their age group. Since the means for suffocation (such as hanging) are highly available, the increased use of suffocation as a method of suicide among individuals ages 10 to 19 years implies that this method is more acceptable by this age group and may be the reason for the increase of individuals using this method for suicide.

The gender difference in the rates of completed suicide is most likely accounted for by the differences in suicide methods (Otsuki, 2002). Among adolescents, a greater number of female suicides are accounted for by poisoning than are male suicides, while firearms, which are much more lethal, account for a greater number of male suicides compared to those of females.

The significance of youth suicide as a major public health problem is even more evident when we take into consideration the high rates of nonlethal suicidal behaviors, such as attempted suicides and suicidal ideation (Otsuki, 2002). It is estimated that for every adolescent suicide, there are more than 100 unsuccessful attempts. This causes the tragedy to spread even further. According to the survey conducted by the Centers for

Disease Control and Prevention (2006), called the Youth Risk Behavior Surveillance System (YRBSS), 2.3% of students nationwide made a suicide attempt that resulted in an injury, poisoning, or overdose that required treatment by a doctor or nurse. It is important to recognize suicide attempts since the individual is at a higher risk for an eventual suicide completion.

*Prevention Strategies*

Since the adolescent suicide rate remains at an alarmingly high rate, it is vital that schools, agencies, and society use the available resources in the most effective manner possible to decrease this rate. There are numerous prevention strategies that can be applied to accomplish this objective.

Adolescent suicide control can take many forms, which can include prevention and early intervention. Prevention includes education efforts to inform students and the community about the problem of adolescent suicide. Intervention with a suicidal adolescent aims at protecting and assisting the student who is in distress.

Adolescent suicide prevention often involves education, which can be done in a health class by the school nurse, school psychologist, school counselor, or an outside speaker. An effective population-based strategy to prevent adolescent suicide should include a school-based approach, given that such an approach is the most efficient way to reach large numbers of young people (Hallfors, Brodish, Khatapoush, Sanchez, Cho, & Steckler, 2006). Education of adolescent suicide should address the risk factors that may make individuals more vulnerable to suicidal thoughts and behaviors, which include depression, family stress, loss, and alcohol or other drug abuse. Parents should also be involved in the prevention and education process. Educators and community mental

health agencies should also strive to educate parents at the schools or community agencies through activities such as meetings or PTA dinners. This allows mental health professionals from the community to discuss their programs that focus on the issues of adolescent suicidal ideation and suicidal behaviors.

Another form of adolescent suicide prevention is actually treating a psychological disorder that the adolescent may be experiencing, such as depression, bipolar disorder, borderline personality disorder, schizophrenia, and alcohol or other drug abuse. School personnel can be educated in recognizing the symptoms of these mental health disorders and may refer the student to the school counselor or school psychologist, who can then take the appropriate steps to inform the student's parent(s). They can also refer the parent(s) to a community mental health clinic or agency, or a child and adolescent psychiatrist. Getting treatment for mental health disorders can reduce the risk of an adolescent attempting suicide because of the disorder.

There are also a number of programs at the community and national level, which aim at preventing adolescent suicide. The majority of suicides occur among Caucasian adolescents; consequently, most interventions are based on Caucasian adolescents' suicidal behavior (Rutter & Behrendt, 2004). However, these programs can help prevent adolescent suicide, regardless of ethnicity. Columbia University has a program called TeenScreen, whose goal is to ensure that all parents are offered the opportunity for their teenagers to receive a mental health check-up. The main goal of the program is to help young people and their parents to identify mental health problems early. The screening requires parental consent and the results are always confidential. The most important goal of TeenScreen is to find youth with depression and other emotional disorders before they

begin to fall behind in their academics, end up in trouble with the law, or worst of all, commit suicide. This program is supported by 34 national organizations, which include the American Academy of Child and Adolescent Psychiatry, the American Federation of Teachers, and the President's New Freedom Commission on Mental Health. The TeenScreen program helps create partnerships with communities nationwide to implement their own type of screening programs for youth; they do not recommend or endorse any particular treatment of youth identified by the screening.

Another program at the federal level is the Surgeon General's Call to Action to Prevent Suicide. The Surgeon General's Call to Action to Prevent Suicide calls for enhanced research to understand suicidality risk and protective factors and their interactions, as these factors form the empirical base for suicide prevention (cited in Borowsky, Ireland, & Resnick, 2001). This introduces a plan for reducing suicide and the associated toll that mental health disorders take. The first steps are categorized as AIM: Awareness, Intervention, and Methodology. Awareness refers to broadening the public's awareness of suicide and the risk factors associated with suicide. Intervention is aimed at enhancing programs and services that are both population-based and clinic-based. Methodology refers to advancing the science of suicide prevention.

There are also goals within each of these first three steps. One of the main goals of awareness is to promote public awareness that suicide is a serious public health concern and that suicides are preventable. Another goal is to expand this awareness and help enhance the resources available in communities for prevention programs and mental health disorder assessment and treatment. The last goal is to develop and implement different strategies to reduce the stigma that is associated with mental illness, suicidal

behavior, and with seeking treatment for these problems (Department of Health and Human Services, 1999).

There are several goals in the intervention step. The first goal is to extend collaboration among public and private agencies to complete a National Strategy for Suicide Prevention. A second goal is to help eliminate the barriers in public and private insurance programs in order to provide quality mental health disorder treatments. Another important goal is to provide training for all health, mental health, substance abuse, and human service professionals (which include teachers, correctional workers, and social workers) concerning suicide risk assessment, treatment, and aftercare interventions. The last goal is to develop and implement effective programs in educational settings for students, which address teenage distress, provide crisis intervention, and include peer support for seeking help.

The objective under the methodology step is to advance the science of suicide prevention. Included is the goal of increasing research on effective prevention programs, clinical treatments, and culture-specific interventions. A second goal is to develop more scientific strategies for evaluating suicide prevention interventions. Another goal is to establish techniques for federal, regional, and state interagency public health collaboration to improve monitoring systems for suicide and suicidal behaviors. The last goal is to encourage the development and evaluation of new prevention technologies, which include firearm safety measures in order to reduce the easy access to lethal means of suicide.

A third program available is an evidence-based suicide prevention program called Signs of Suicide (SOS). This program is school-based and targets high school students

ages 14 to 18 years. The program was launched in 2000 by Screening for Mental Health, Inc., a non-profit mental health screening organization. This program is based on the belief that suicide is directly related to mental health disorders, most commonly depression. It incorporates two strategies into one program, combining a curriculum that raises awareness of suicide and related issues with a screening tool for depression and other risk factors associated with suicidal behavior. The goal is to help students recognize the signs and symptoms of depression and suicide and to follow specific action steps to respond to those signs.

The Signs of Suicide program teaches students to use the acronym for a rescue technique: ACT, which stands for acknowledge, care, and tell. After learning how to recognize the signs of suicide in a peer, students are encouraged to acknowledge those warning signs and take them seriously, let the peer know he or she cares, and tell a responsible adult (Bender, 2004). The program activities include a 50-minute classroom presentation featuring a 25-minute student video called *Friends for Life: Preventing Teen Suicide*, a teacher led discussion, and the administration and scoring of the SOS Student Screening Form. Students with certain scores or those who answer "yes" about having suicidal thoughts or past suicide attempts are urged to talk immediately to a school official, such as a teacher, nurse, counselor, or psychologist.

Screening for Mental Health also sends schools a procedural guide to assist in implementing the SOS program, which includes a template for school personnel on how to respond to students in distress, as well as a discussion guide to help teachers answer students' questions and provide information about resources of where to turn if they are

experiencing symptoms of depression. The program also provides support materials, such as posters, handouts, and cards.

Finally, another adolescent suicide prevention program is The Jason Foundation, Inc. It is a nationally recognized provider of educational curriculum and training programs for students, educators, youth workers, and parents. The program was founded in 1997 by the family of 16-year-old Jason Flatt, in response to his tragic suicide. The main goal is to provide information, tools, and resources to confront and prevent the tragedy of adolescent suicide. The Jason Foundation, Inc. accomplishes this goal by providing programs and services including staff development training seminars, parent seminars, a school-based curriculum, a resource hotline, and a virtual school program.

The program offers a school curriculum called "A Promise for Tomorrow," which is designed for grades 7 through 12 and focuses on the awareness and prevention of teenage suicide. The curriculum includes statistics on the issue of teenage suicide, signs of concern, and information on resources that are available. The program is designed to be used either independently or as part of a health-related curriculum. The seminar package includes a CD-ROM and manual for teacher training, a video used for student discussion, and student materials, including brochures, promise cards, and a list of help lines and crisis centers.

The Jason Foundation, Inc program also offers numerous seminars specifically designed for teenagers, parents, and staff development. The seminars for adolescents provide them signs of suicide that may be noticed among friends before anyone else notices the changes. It also provides youth with information of what to do and where to go for assistance if an adolescent suspects a friend may be considering suicide. The staff

of the Jason Foundation, Inc. presents the seminars to parents and provides the statistics associated with the tragedy of youth suicide in order to increase parental awareness. They also supply parents with information about the signs of concern that are unique to their relationship with their child, as well as helpful resources on what to do if they suspect their child is at risk. There is also specialized training offered to educators, law-enforcement, youth workers, and others who may work with adolescents. These seminars promote awareness and prevention of youth suicide through detailed information and discussions, including statistical data, signs of concern, and risk factors. Resources specifically pertinent to the teacher-student relationship are explored and information for teachers to help a depressed or suicidal student is also offered.

The Jason Foundation, Inc. offers a program called Community Assistance Resource Line (C.A.R.L.). It is a twenty-four hour/seven-day telephone resource line for anyone in need of information about suicide ideation in adolescents. Trained clinical specialists provide free and confidential information to parents, teachers, and other youth workers to assist in identifying and intervening with adolescents who may be experiencing suicidal ideation. Finally, The Jason Foundation, Inc. offers educational seminars through distance learning in collaboration with Vanderbilt University's Virtual Schools Program, which allows the programs to be presented in a cost-effective manner to others around the world in order to reach a greater number of people to increase awareness and prevention strategies.

*Summary*

There are a number of suicide prevention strategies to help reduce the number of adolescent suicides. One important method is educating the public of adolescent suicide.

including risk factors. Another strategy is to treat psychological disorders, which place an adolescent at an increased risk of suicide, including depression, bipolar disorder, borderline personality disorder, schizophrenia, eating disorders, and alcohol or other drug abuse. There are also specific programs aimed at suicide prevention, which include TeenScreen (2005), the Surgeon General's Call to Action to Prevent Suicide plan (1999), Signs of Suicide (SOS) (2005), and The Jason Foundation, Inc (2006). TeenScreen works to identify mental health disorders early to prevent an adolescent from turning to suicide as a solution. The Surgeon General's Call to Action plan (1999) includes three main steps in suicide prevention, which are awareness, intervention, and methodology to promote education, enhancing programs, and science to prevent suicide. Signs of Suicide (SOS) aims to help students recognize the signs and symptoms of suicide and to follow the appropriate action steps known as ACT: acknowledge, care, and tell. Finally, The Jason Foundation, Inc. offers comprehensive services, including educational training, training seminars, and community resources to prevent the tragedy of adolescent suicide.

# CHAPTER 3

# CRITICAL ANALYSIS

## *Introduction*

Based on examination of the literature on adolescent suicide, it is apparent that there are several risk factors and warning signs associated with adolescent suicide and suicidal behavior. Extensive research explains the most commonly used methods of committing suicide among adolescents. There are also numerous adolescent suicide prevention programs available. A summary of this literature, which discusses the key points and significant findings, is included here. Finally, implications and recommendations regarding this literature are discussed.

## *Summary of Findings*

There is an extensive amount of research on adolescent suicide. Suicide remains the third leading cause of death among adolescents (National Mental Health Association, 1997). Unfortunately, the problem is magnified when suicidal ideation and suicidal behaviors are taken into consideration. Numerous risk factors and warning signs, methods of suicide, and prevention strategies have been researched.

Several risk factors and warning signs have been identified for adolescent suicide. Many youth suicides are the result of a combination of biological, psychological, sociocultural, and family factors. These risk factors can include undiagnosed mental health disorders such as depression, bipolar disorder, schizophrenia, borderline personality disorder, eating disorders, and alcohol or other drug abuse. Another important risk factor is any previous suicide attempt. Family history and genetics are other risk factors in adolescent suicide, which include a family history of mental illness, attempted

suicide, or completed suicide. Another risk factor for adolescent suicide is any stressful situation such as a divorce, a loss, moving, conflicts with family or friends, a history of physical or sexual abuse, and self-identification as homosexual. There are many warning signs that an adolescent may exhibit if they are considering suicide. These can include verbal, physical, and behavioral signs. They may make verbal remarks which indicate that they are unhappy and don't plan on being around much longer. They may complain of physical symptoms including headaches and stomachaches. There may also be an increase of behavioral symptoms that may include personality changes and an increase of violent behavior. It is vital that parents, family members, friends, and educators pay close attention to any of these signs in order to help prevent the adolescent from attempting suicide.

Another area of the literature review is methods of adolescent suicide. This area has been extensively researched. The three most common methods of adolescent suicide are the use of firearms, suffocation, and poisoning. However, data has indicated a decline in suicides by firearms and an increase in suicides by suffocation in individuals ages 10 to 14 and ages 15 to 19 years (Centers for Disease Control and Prevention, 2004). The reason for this change is not completely understood. One explanation may be that more deaths by firearms may be ruled a different cause of death than suicide, such as accidental, than in the past, when the cause is not clear. Also, stricter gun control laws and better firearm storage may account for the decrease in suicides by firearms and the increase in suicide by suffocation. Finally, more deaths by suffocation may be ruled as suicidal rather than accidental, than in the past, when the cause is not clear. The number

of adolescents who engage in suicidal ideation and suicidal behaviors further magnifies the concern over the issue of adolescent suicide.

The final area of the literature review is prevention strategies. A number of strategies were examined. One form of prevention is education. This involves educating the public about adolescent suicide, including risk factors, warning signs, and treatment options. A second form of prevention is treating any existing mental health disorders that may increase the risk of suicide in adolescents, which may include depression, bipolar disorder, schizophrenia, borderline personality disorder, eating disorders, and alcohol or other drug abuse.

There are also programs that aim to prevent suicide among adolescents. One program available is TeenScreen. This program helps to ensure that all parents are offered the opportunity for their teenagers to receive a mental health check-up. The main goal of the program is to help young people and their parents identify mental health problems early enough to prevent them from turning to suicide as a solution. Another program by the federal government is the Surgeon General's Call to Action plan (1999) to prevent suicide. This plan includes three main steps in suicide prevention, which are awareness, intervention, and methodology to promote education, enhancing programs, and science to prevent suicide. The program Signs of Suicide (SOS) educates students on recognizing the signs and symptoms of suicide and provides an acronym called ACT, which helps students respond to a peer's suicidal behavior appropriately. Finally, The Jason Foundation, Inc. offers students, parents, educators, and communities the opportunity to become more aware of suicide through training programs and community resources.

*Implications*

This literature review has several implications. First, it will allow those closest to adolescents to become better informed of the issues surrounding adolescent suicide. By having this knowledge, family, friends, educators, and other professionals will be more equipped to recognize the critical warning signs and to effectively implement suicide prevention programs. Also, being aware of the empirical research that is available will assist the public to make more informed decisions, which, in turn, will allow the public and professionals to be advocates for adolescents in need.

*Recommendations*

The literature on adolescent suicide indicates that there is a need for more thorough research in the areas of risk factors and warning signs, methods of suicide, and prevention strategies. One recommendation is further examination of pharmacological treatments of adolescent mental health disorders. Currently, there is controversy regarding the use of antidepressants with adolescents. The Food and Drug Administration (2004) issued a public health advisory cautioning physicians, patients, and their families to monitor adults and children taking antidepressants for suicidal behavior. The advisory was based on the results of several studies conducted by pharmaceutical sponsors, as well as data from the Treatment for Adolescents with Depression Study (TADS), which found that antidepressant use was associated with a new onset of suicidal behavior (Leslie, Newman, Chesney, & Perrin, 2005). Following these studies, the Food and Drug Administration required manufacturers to add a black-box warning to antidepressant labels regarding an increased risk for suicidal behavior. This warning has resulted in an increased awareness of adolescent suicide and the possible treatment options for

depression (Dopheide, 2006). Consequently, clinicians express concern that this warning will result in more adolescent suicides due to the decreased use of antidepressants among this population. The potential benefits of some antidepressants may outweigh the risks of treatment among some adolescents (Dopheide, 2006). The relationship between treatment of psychiatric disorders and the prevention of adolescent suicide needs further clarification.

Further research is also needed in the area of protective factors, such as healthy family and peer relationships. This will help mental health professionals, medical professionals, and educators to educate family and friends to promote factors such as healthy relationships with family and friends, and programs that will help increase self-esteem. Another suggestion is to explore the more uncommon methods of suicide in order to create better prevention programs that focus on these unusual means of suicide.

Another recommendation is to examine suicide prevention programs for college-age students. Currently, much of the research on prevention programs focuses on secondary age students and does not include programs for older adolescents. There is also little research in the area of the feasibility of suicide prevention programs. It is vital to make sure these programs are practical within the mental health and educational settings in order for them to be effective. Investigation also needs to be conducted regarding the current knowledge of suicide among students, families, mental health professionals, medical professionals, law enforcement, and educators. It is essential to find out how much awareness the public has regarding adolescent suicide to find better techniques of educating those closest to adolescents about suicide prevention. Also, more research is necessary in the area of prevention programs for students of color. Due to the high rate of

adolescent suicide among different ethnic groups, including Native Americans, African Americans, and Hispanics, further study should be conducted to develop effective prevention programs for these groups that meet their needs. For example, factors such as healthcare coverage costs and accessibility to mental health care need to be considered.

A final recommendation is to implement standardized prevention programs in all schools, communities, and government agencies. This action will help these programs to be much more easily understood by the public, and will lay out the necessary steps to be taken when assessing a suicidal student in a simple procedure that can be followed by everyone.

State and national governments should recognize that adolescent suicide, including its correlates of suicidal ideation, and suicidal behavior, remains a public health threat that needs to be addressed. These agencies need to make it a priority to work together to develop and implement prevention programs to reduce this serious public health concern.

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